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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,318	07/10/2003	Richard W. Wall	01-006-01/4147 (IDRF116)	2822

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EXAMINER	
VIANA DI PRISCO, GERMAN	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
07/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/617,318	WALL ET AL.	
	Examiner	Art Unit	
	German Viana Di Prisco	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Applicant is claiming a data structure (data packet). A data structure is a "functional descriptive material" per se and is non statutory (33 F.3d at 1360, 31 USPQ2d at 1759). The claimed data structure is non statutory because it does not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooms et al (United States Patent No.: US 6,522,630) in view of Frouin et al (United States Patent No.: US 7,099,322 B1).

Consider claim 8, Ooms et al. disclose an explicit routing method wherein a routing control list identifying a node responsible for passing electronic data is generated and a packet containing the routing control list (NN2-NN5-NN7-NN8) and the electronic data (payload in IP packet) is assembled (column 4 lines 10-15). Said method

is executed by a node SN1 (figure 2), which inherently teaches a computer readable medium.

However Ooms et al. fail to specifically disclose generating routing control data identifying a first communication media to be used to pass the electronic data to the identified node and a second communication media to be used to pass the electronic data from the identified node.

In the same field of endeavor Frouin et al. show and disclose a bridge that makes it possible to transfer data packets from a first part of a network to a second part of the network via wire, optical or radio link wherein a first communication media to be used to pass the electronic data to the identified node (field 1081a) and a second communication media to be used to pass the electronic data from the identified node (field 1080a) are identified (figure 2, column 1 lines 23-26 and column 11 lines 33-55).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to identify the communication media as disclosed by Frouin et al. in the routing method of Ooms et al. for the purpose of explicitly determine the route a packet will follow from a source node to a destination node.

Consider claim 9 and as applied to claim 8 above Ooms et al. disclose generating a routing control list including instructions for generating a routing control list identifying a plurality of nodes responsible for passing the packet (nodes NN2-NN5-NN7-NN8) (column 4 lines 10-15).

However Ooms et al. fail to specifically disclose generating routing control data include instructions for generating routing control data identifying, for each node identified by the routing control list, a communication media to be used to pass the electronic data to that node and another communication media to be used to pass the electronic data from that node.

In the same field of endeavor Frouin et al. show and disclose a bridge that makes it possible to transfer data packets from a first part of a network to a second part of the network via wire, optical or radio link wherein a first communication media to be used to pass the electronic data to the identified node (field 1081a) and a second communication media to be used to pass the electronic data from the identified node (field 1080a) are identified (figure 2, column 1 lines 23-26 and column 11 lines 33-55).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to identify the communication media as disclosed by Frouin et al. in the routing method of Ooms et al. for the purpose of explicitly determine the route a packet will follow from a source node to a destination node.

Consider claim 10 and as applied to claim 9 above Ooms et al disclose generating a routing control list include instruction for generating a routing control list that identifies a successive order in which the packet is to be passed from a first node to a second node (packets are routed in successive order from SN1 to NN2 and then to NN5 and then to NN7 and then to NN8 and then to the destination DN) (column 4 lines 10-15).

However Ooms et al. do not specifically disclose generating routing control data include instructions for generating routing control data identifying that the communication media to be used to pass the packet from the first node is the same communication media to be used to pass the packet to the second node.

In the same field of endeavor Frouin et al. show and disclose a bridge that makes it possible to transfer data packets from a first part of a network to a second part of the network via wire, optical or radio link wherein a first communication media to be used to pass the electronic data to the identified node (field 1081a) and a second communication media to be used to pass the electronic data from the identified node (field 1080a) are identified (figure 2, column 1 lines 23-26 and column 11 lines 33-55).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the same type of interface identifying the same communication media as disclosed by Frouin et al. in the routing method of Ooms et al. for the purpose of explicitly determine the route a packet will follow from a source node to a destination node.

Consider claim 11 and applied to claim 9 above, Ooms et al. disclose generating a routing control list that includes, for each of the plurality of nodes, a plurality of bits that identify that node (address of node in header of packet) (column 1 lines 20-22)

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooms et al (United States Patent No.: US 6,522,630) in view of Frouin et al (United

States Patent No.: US 7,099,322 B1), and further in view of Michel et al (United States Patent No.: 5,268,666).

Consider claim 12 and as applied to claim 8 above, Ooms et al. as modified by Frouin et al. disclose the claimed invention but fail to specifically teach that the routing control data include instructions for generating routing control data that includes a first bit identifying the first communication media and a second bit identifying the second communication media.

In the same field of endeavor Michel et al. disclose generating routing control data that includes a first bit identifying the first communication media and a second bit identifying the second communication media (column 7 line 67-column 8 line 5).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a first bit identifying the first communication media and a second bit identifying the second communication media as disclosed by Michel et al. in the routing method of Ooms et al. as modified by Frouin et al. for the purpose of determining the type of communication media.

Consider claim 13 and as applied to claim 12 above, Ooms et al. as modified by Frouin et al. disclose the claimed invention but fail to specifically teach that the routing control data include instructions for generating routing control data that includes a third bit used to request that data be returned and a fourth bit identifying the data to be returned.

In the same field of endeavor Michel et al. disclose generating the routing control data include instructions for generating routing control data that includes a third bit used to request that data be returned and a fourth bit identifying the data to be returned (column 8 lines 22 – 24).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a third bit used to request that data be returned and a fourth bit identifying the data to be returned as disclosed by Michel et al. in the routing method of Ooms et al. as modified by Frouin et al. for the purpose of controlling how information is to be routed.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ooms et al (United States Patent No.: US 6,522,630) in view of Frouin et al (United States Patent No.: US 7,099,322 B1), and further in view of Zhang et al (United States Patent No.: US 7,154,858 B1).

Consider claim 14 and as applied to claim 8 above, Ooms et al. as modified by Frouin et al. disclose the claimed invention but do not specifically disclose further comprising generating a length field.

In the same field of endeavor Zhang et al show and disclose a packet containing a length field as well as the routing control list, the routing control data, and the data to be transmitted (figure 1 A and column 2 lines 30-67).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to generate a length field and assemble a packet

containing the length field, the routing control list, the routing control data, and the data to be transmitted as disclosed by Zhang et al in the routing method of Ooms et al. as modified by Frouin et al. for the purpose of explicitly routing a packet.

8. Claims 15,17,18 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (United States Patent No.: US 7,154,858 B1) in view of Frouin et al (United States Patent No.: US 7,099,322 B1).

Consider claims 15 and 18, Zhang et al show and disclose obtaining a first routing control list and a first routing control data from an originating packet, the routing control list identifying a plurality of nodes responsible for passing the originating packet (figures2 and 4 and column 8 lines 20-24); generating a second routing control list by reversing the order in which the first control list identifies the plurality of nodes (Figures 2-5 and column 15 lines 15-22 and column 12 lines 29-34); and assembling the response packet from the second routing control list, the second routing control data, and data, if any, to be returned in response to the originating packet (packet 500 in figure 5 and column 11 lines 23-25).

However Zhang et al do not specifically disclose that the routing control data specifies a communication media for passing packet to or from the node.

In the same field of endeavor Frouin et al. show and disclose a bridge that makes it possible to transfer data packets from a first part of a network to a second part of the

network via wire, optical or radio link wherein a first communication media to be used to pass the electronic data to the identified node (field 1081a) and a second communication media to be used to pass the electronic data from the identified node (field 1080a) are identified (figure 2, column 1 lines 23-26 and column 11 lines 33-55).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to identify the communication media as disclosed by Frouin et al. in the routing method of Ooms et al. for the purpose of explicitly determine the route a packet will follow from a source node to a destination node.

Consider claims 17 and 20, and as applied to claims 15 and 18 above respectively, Zhang et al. as modified by Frouin et al. disclose generating a length field identifying a length of the response packet (figure 5 and column 12 line 1), and wherein the instructions for assembling include instructions for assembling the response packet from the length field, the second routing control list, the second routing control data, and data, if any, to be returned in response to the originating packet (response packet 500 in figure 5 and column 11 line 23-column 12 line23).

9. Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (United States Patent No.: US 7,154,858 B1) in view of Frouin et al (United States Patent No.: US 7,099,322 B1) as modified by, and further in view of Michel et al (United States Patent No.: 5,268,666).

Consider claims 16 and 19, and as applied to claims 15 and 18 above respectively, Zhang et al as modified by Frouin et al disclose the claimed invention but

do not specifically disclose including a bit identifying a first communication media used to pass the originating packet to that node and a second bit identifying a second communication media used to pass the originating packet from that node.

In the same field of endeavor Michel et al. disclose generating routing control data that includes a first bit identifying the first communication media and a second bit identifying the second communication media (column 7 line 67-column 8 line 5).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a first bit identifying the first communication media and a second bit identifying the second communication media as disclosed by Michel et al. for each direction of the communication in the routing method of Ooms et al. as modified by Frouin et al. for the purpose of determining the type of communication media.

Conclusion

10. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Viana Di Prisco whose telephone number is (571) 270-1781. The examiner can normally be reached on Monday through Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

German Viana Di Prisco
July 18, 2007

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER